CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER 98 - 065

REVISED WASTE DISCHARGE REQUIREMENTS and
RESCISSION OF ORDER Nos. 87 –074, 92 – 129 AND 90 - 138

CHEMICAL & PIGMENT CO.
Bay Point, CONTRA COSTA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region, herein called the Board, finds that:

1. **Description of Discharger:** The Chemical & Pigment Co., (hereinafter called the discharger or CPC) owns and operates a chemical manufacturing facility (hereinafter called the Facility), in the community of Bay Point. The Facility manufactures chemical products for agricultural fertilizers and soil amendments, primarily zinc based compounds. In the past the facility also manufactured copper based compounds.

2. **Location of Facility:** The facility is located in the community of Bay Point in Contra Costa County at 600 Nichols Road as indicated in Figure 1. The facility is about 800 feet north of the intersection of Nichols Road and Port Chicago Highway. The Concord Naval Weapons Station occupies the property west of the facility.

3. **Board Action:** On June 17, 1987, the Board adopted Order 87 – 074, issuing Waste Discharge Requirements to CPC pursuant to the Toxic Pits Cleanup Act of 1984 (TPCA). The order provided for the upgrade of a waste impoundment located on the facility. Cease and Desist Orders 90 –138 and 92 -129, required CPC to conduct remedial investigations, close and provide a post closure maintenance plan for the waste impoundment. In addition Order 92 –129 required stormwater and soil stockpile management plans as well as investigation of offsite migration of contaminants.

4. **Purpose of Order:** This Order revises the Waste Discharge Requirements Order 87 – 074 and rescinds Cease and Desist Orders 90 –138 and 92 - 129. CPC has completed the necessary impoundment investigations and closure requirements of the Orders. Further on-going impoundment remedial action, monitoring, post closure maintenance and storm monitoring as well as stockpile closure activities are addressed in this Order.

5. **Impoundment Operation:** In the past the discharger operated the unlined surface impoundment located in the northwestern corner of the facility. Stormwater runoff, boiler blowdown, water softener solution, sodium hydroxide solution, and process drippings was discharged to the surface impoundment. The water in the impoundment was recycled back into the manufacturing process. Sludge in the impoundment was occasionally excavated and stored on site in bunkers for eventual recycling into the manufacturing process. The bunkers were also used to store raw materials and intermediate process materials.

6. **Impoundment Waste Impact:** Copper, lead and zinc were the principal soil and groundwater contaminants. Title 22 of the California Code of Regulations defines wastes with zinc concentration in excess of 5,000 mg/kg as hazardous. Sludge from the impoundment had or continued to have zinc concentrations as high as 110,000 mg/kg. The unit posed a threat to water quality. The state drinking water maximum contaminant level standard is 5.0 mg/L for zinc. The groundwater beneath the impoundment had zinc concentrations up to 6,250 mg/L

7. **Closure Summary:** The surface impoundment was closed by October 25, 1996. CPC removed the liquid in the impoundment and compacted the existing waste and native soil. The impoundment was then filled and capped and a drainage system installed. Details of the closure design are documented in the December 18, 1996 "Impoundment Closure" report. In addition to this closure, the discharger will continue with groundwater monitoring and groundwater drawdown to minimize groundwater contact with contaminants.

8. **Soil Stockpile (or Waste Pile)**: About 14000 cubic yards of soil stockpile containing inorganic substances were stored on site at the corner of an area named "South Field". About 12,482 cubic yards of this soil remain stockpiled on site, following the July 1994 shipping of about 1518 cubic yards of the soil stockpile to Gibson Environmental located in Bakersfield California. The stockpile was generated as a result of court Ordered excavation cleanup of the South Field area of the site. In the past, sludge from onsite operations was spread and weed killers were sprayed in the South Field area. This discharge caused an elevated concentration of inorganic contaminants and in some cases samples were as high as 6500 mg/kg for copper, 37800 mg/kg for lead and 62 500 mg/kg for zinc and 63 mg/kg of cadmium. Order 92 –129 required a plan to manage the zinc stockpile. Board's staff approved a plan for process reuse and use as fill for the impoundment. CPC did not implement this plan. The South Field stockpile disposal action is needed due the threat to groundwater and Nichols Creek that empties into the Suisun Bay mud flat.

9. **Nichols Creek:** The creek originates from springs in the adjacent hills owned by the Navy, runs directly west of the facility and empties into the Suisun Bay mud flats through a series of culverts. Storm water from the South Field discharges directly into the adjacent Nichols

Creek and poses a threat due to the potential inorganic metal discharge.

10. **Groundwater units**: Seasonal groundwater was encountered in shallow monitoring wells at depths 24 feet to 34 feet below ground surface and are thought to come from the discontinuous sand lenses in the upper silty clay and silty layers. Lower sand groundwater is encountered at depths of 40 feet and 45 feet below ground surface, with a northeasterly flow across the impoundment. The deep Sand Unit is penetrated by the discharger's water supply well (WSW), which was abandoned in 1991. The WSW was drilled to a 100 feet total depth and the saturated deep sand unit begins from about 65 feet below ground surface. The extent and thickness of this saturated unit is not known.

11. **Groundwater Monitoring System:** The existing monitoring system includes 16 monitoring wells as shown in Figure 3. The wells with "V" designation are the vadose or shallow wells while the wells, with "M" designation are the deep wells.

12. **Discharge Requirements:** Evaluation of the groundwater extraction system is necessary to determine the effectiveness of containment and remediation of contaminated groundwater and the reduction of groundwater contact with contaminated soil. Closure or removal and appropriate disposal of the stockpile is needed due to the threat to CPC staff, groundwater and Nichols Creek that empties into the Suisun Bay mud flat. CPC indicates that it has investigated various other means to resolve or dispose of the soil. This Order will require a plan of implementation.

13. **Applicable Regulations:** Solid waste discharge requirements for surface impoundment and waste Pile applies to to the closed Surface impoundment and soil stockpile respectively, pursuant to Division 2 of Title 27 of the California Code of Regulations (CCR)).

14. **Basin Plan:** The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) on June 21, 1995. The updated and consolidated plan represents the Board's master water quality control planning document. The revised Basin Plan was approved by the State Water Resources Control Board and the Office of Administrative Law on July 20, 1995, and November 13, 1995, respectively. A summary of regulatory provisions is contained in 23 CCR 3912. The Basin Plan defines beneficial uses and water quality objectives for waters of the State, including surface waters and groundwaters

15. **Beneficial Uses of Suisun Bay :** The beneficial uses of the Suisun Bay in the vicinity of the site are:

    a. Contact and non-contact water recreation;
    b. Fish migration and spawning;

c. Wild life and estuarine habitat;
d. Preservation of Rare and endangered species;
e. Industrial process supply;
f. Contact and non contact recreation;
g. Estuarine habitat;
h. Navigation; and,
i. Commercial and sport fishing.

16. **Beneficial Uses of Surface water:** The beneficial uses of the Nichols Creek in the vicinity of the sites are:

    a. Wild life and estuarine habitat;
    b. Preservation of Rare and endangered species;
    c. Estuarine habitat;

17. **Beneficial Uses of groundwater:** The potential beneficial uses of the groundwater underlying the site are:

    a. Municipal water supply and service supply; and,
    b. Agricultural supply.

18. **CEQA:** This action is exempt from the provisions of the California Environmental Quality Act pursuant to Section 15301, Title 14 of the California Code of Regulations.

19. **NOTICE and MEETING:** The Board notified the discharger and interested agencies and persons of its intent under the California Water Code Section 13263 to consider the adoption of the revised waste discharge requirement, and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.

20. The Board, in a public hearing, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that Chemical and Pigment, their agents, successors, and assigns shall meet the applicable provisions contained in Division 2 of Title 27 of the California Code of Regulation (CCR) and Division 7 of the California Water Code (CWC), and shall comply with the following.

A. <u>Prohibitions:</u>

1. The discharge of contaminated groundwater onto land or into surface water or

groundwater aquifer is prohibited, unless permitted by an authorized agency.

2. The operation of this facility shall not create a condition of pollution or nuisance as defined in Sections 13050 (l) and (m), of the California Water Code.

3. The discharge of wastes or hazardous material in a manner, which will degrade the water quality or adversely affect the beneficial use of the waters of the state of California is prohibited.

B. Specification:

1. The discharger shall conduct groundwater monitoring of the closed impoundment and other contaminated areas in accordance with the Self-Monitoring Program attached to this Order.

2. The discharger shall remediate and abate further ground water contamination, which actually or threatens to degrade water quality or adversely affect the beneficial uses of the waters of the State as may be directed by the Regional Board.

3. The discharger shall close or remove and appropriately dispose the stockpiled soil in the South Field area of the facility.

4. The discharger shall conduct the post closure groundwater extraction. The discharger shall comply with any amendments to the groundwater extraction system as directed by the Executive Officer.

C. Provision:

The discharger shall comply with the specifications and provisions of this order according to the following tasks and time schedule:

1. The discharger shall conduct semi annual groundwater monitoring of the closed impoundment and its vicinity in accordance with the self monitoring program attached to this Order and shall comply with any amendments to the self monitoring program as directed by the Executive Officer.

2. The discharger shall conduct an evaluation of the groundwater extraction system to determine the effectiveness and recommend changes if any to improve the containment and remediation of contaminated groundwater as well as the reduction of groundwater contact with contaminated soil. **Report due no later than October 30, 1998**

3. The South Field stockpile shall be removed or closed as follows:

a. The Discharger shall propose a plan, acceptable to the Executive Officer, to close or remove and dispose of the stockpile soil at the south field portion of facility. **Report due no later than December 31, 1998**.

b. The discharger shall close or remove the stockpile and submit a report of closure **no later than December 31, 1999.**

4. The discharger shall continue to maintain and improve the storm water collection system as documented in the report "Proposed Groundwater Extraction and Stormwater Collection System Plan Modifications, July 3, 1993". The discharger shall comply with any amendments to the storm water management system as directed by the Executive Officer.

5. The discharger shall conduct a 2-year stormwater monitoring adjacent to Nichols Creek and within the western borders of the South field area. The discharger shall sample three locations and the schedule of sampling for storm water shall be **three times per year** during different storm events. The results of this sampling and analysis shall be reported semiannually with the Self-Monitoring Program report required by this Order. **A plan for the implementation of the stormwater monitoring program is due no later than September 30, 1998.**

6. Orders No. 87 - 074, Order 90 – 138 and 92 – 129 are hereby rescinded.

7. Reports pursuant to compliance with the prohibitions, specifications, or provisions of this Order shall be prepared under the supervision of a registered civil engineer or certified engineering geologist.

8. All samples shall be analyzed by State certified laboratories or laboratories accepted by the Board using approved EPA methods for the type of analysis to be performed. All laboratories shall maintain quality assurance and quality control records for Board review.

9. The discharger shall maintain in good working order, and operate as efficiently as possible, any facility or control system installed to achieve compliance with the requirement of this Order.

10. Copies of all correspondence, reports, and documents pertaining to compliance with the Prohibitions, Specifications, and Provisions of this Order, submitted by the Discharger, shall also be provided to the following agencies:

    a. Contra Costa County Health Department; and,
    b. California Environmental Protection Agency, Department of Toxic Substances

Control.

11. The discharger shall file with this Board a report of any material change or proposed change in the character, quantity or location of the waste management units. For the purpose of these requirements, this includes any proposed change in the boundaries, contours, or ownership of the stockpile, impoundments and South Field areas.

12. The discharger shall maintain a copy of this Order at the site so as to be available at all times to site operating personnel.

13. The Board considers the property owner and discharger to have continuing responsibility for correcting any problems within their reasonable control which arises in the future as a result of this waste discharge water or applied to this property during subsequent use of the land for other purposes.

14. The discharger shall comply with any amendments to the self monitoring program as directed by the Executive Officer.

15. The discharger shall permit the Board or its authorized representative, in accordance with Section 13267 (a) of the California Water Code, the following:

    a. Entry upon premises on which wastes and impoundment are presently or previously located or in which any required records are kept;

    b. Access to copy of any records required to be kept under terms and conditions of this Order;

    c. Inspection of monitoring equipment or methodology implemented in response to this Order; and,

    d. Sampling of any discharge, groundwater and soil.

16. These requirements do not authorize commission of any act causing injury to the property of another or of the public, do not convey any property rights, do not remove liability under federal, state or local laws, and do not authorize the discharge of waste without appropriate federal, state, or local permits, authorizations, or determinations.

17. If any hazardous substance or extracted groundwater is discharged in or on any waters of the state, or discharged and deposited, or probably will be discharged in or on any waters of the state, the discharger shall report such discharge to the following:

    a. This Regional Board at (510) 622 - 2300 on weekdays during office hours from 8

a.m. to 5 p.m.; and,

b. The Office of Emergency Services at (800) 852-7550.

c. A written report shall be filed with the Regional Board within five working days and shall contain information relative to the following:

i. The nature of waste or pollutant;
ii. The quantity involved and the duration of incident;
iii. The cause of spill;
iv. The estimated size of affected area;
v. The corrective measures that have been taken or planned, and a schedule of these measures; and,
vi. The persons/agencies notified.

18. Technical reports submitted by the discharger, in compliance with the Prohibitions, Specifications, and Provisions of this Order shall be submitted according to the schedule specified herein. These reports shall include consist of a letter report that includes the following:

a. A summary of the work completed since submittal of the previous report and work projected to be completed by the time of next report;

b. Identification of any obstacles that may threaten compliance with the schedule of this Order and what actions are being taken to overcome these obstacles;

c. In the event of non compliance with any Prohibition, Specification or Provision of this Order, written notification, which clarifies the reasons for non-compliance and proposes specific measures and a schedule to achieve compliance. This written notification shall identify work not completed that was projected for completion, and shall identify the impact of non compliance on achieving compliance with the remaining requirements of this order; and,

19. The Board will review this Order periodically and may revise the requirements when necessary.

20. If the Discharger is delayed, interrupted or prevented from meeting one or more of the completion dates specified in this Order, the Discharger shall promptly notify the Executive Officer and the Board shall consider revision to this Order.

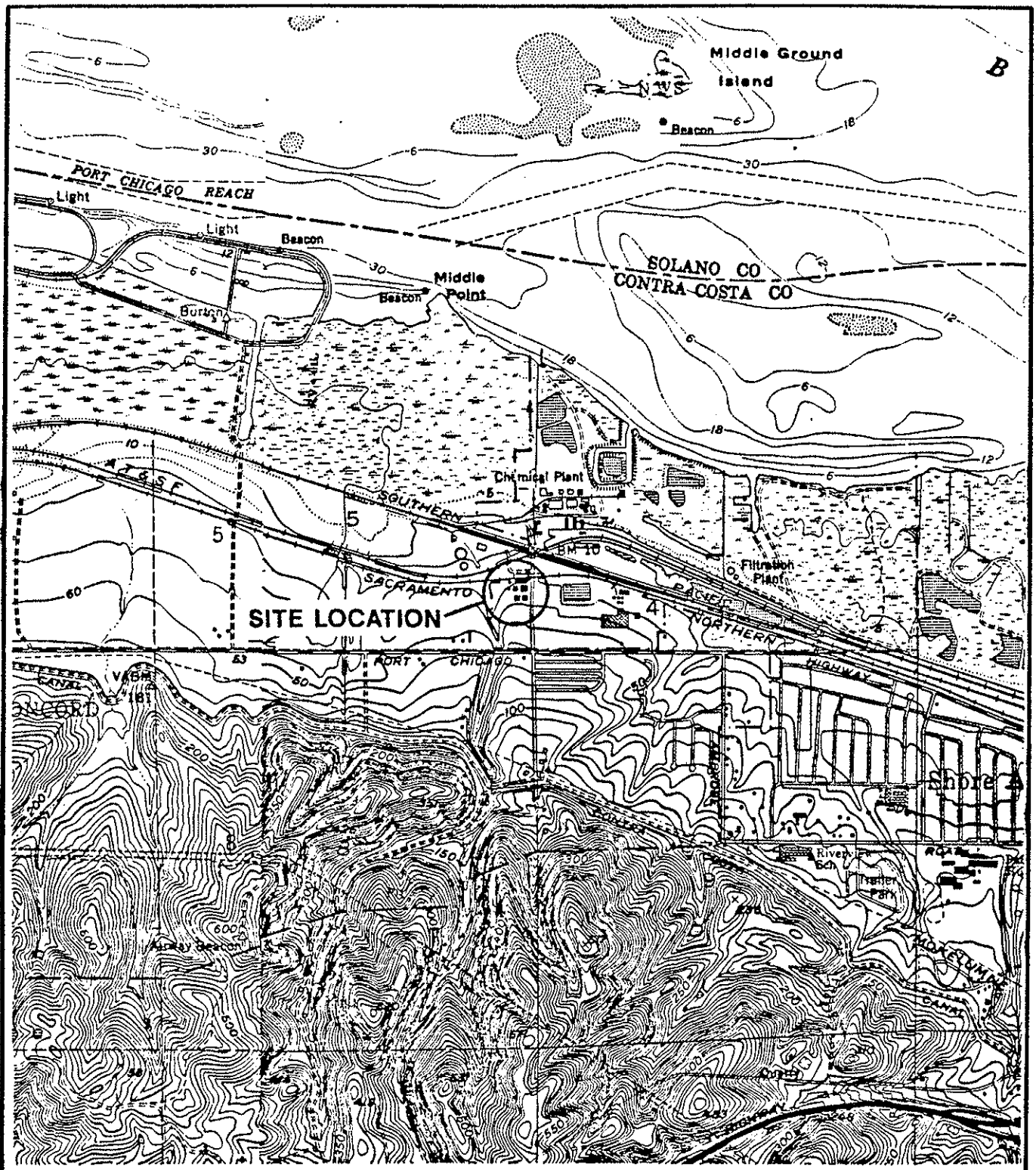
I, Loretta K. Barsamian, Executive Officer, do hereby certify the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on July 15, 1998.

Loretta K. Barsamian

Loretta K. Barsamian
Executive Officer

Attachments:

Figure 1 - Site Location
Figure 2 - Site Plan
Figure 3 – Monitoring Well Locations



Cal/EPA
RWQCB
San Francisco Bay
2101 Webster st. Suite 500
Oakland Ca 94612

SCALE: 0 FEET 2000

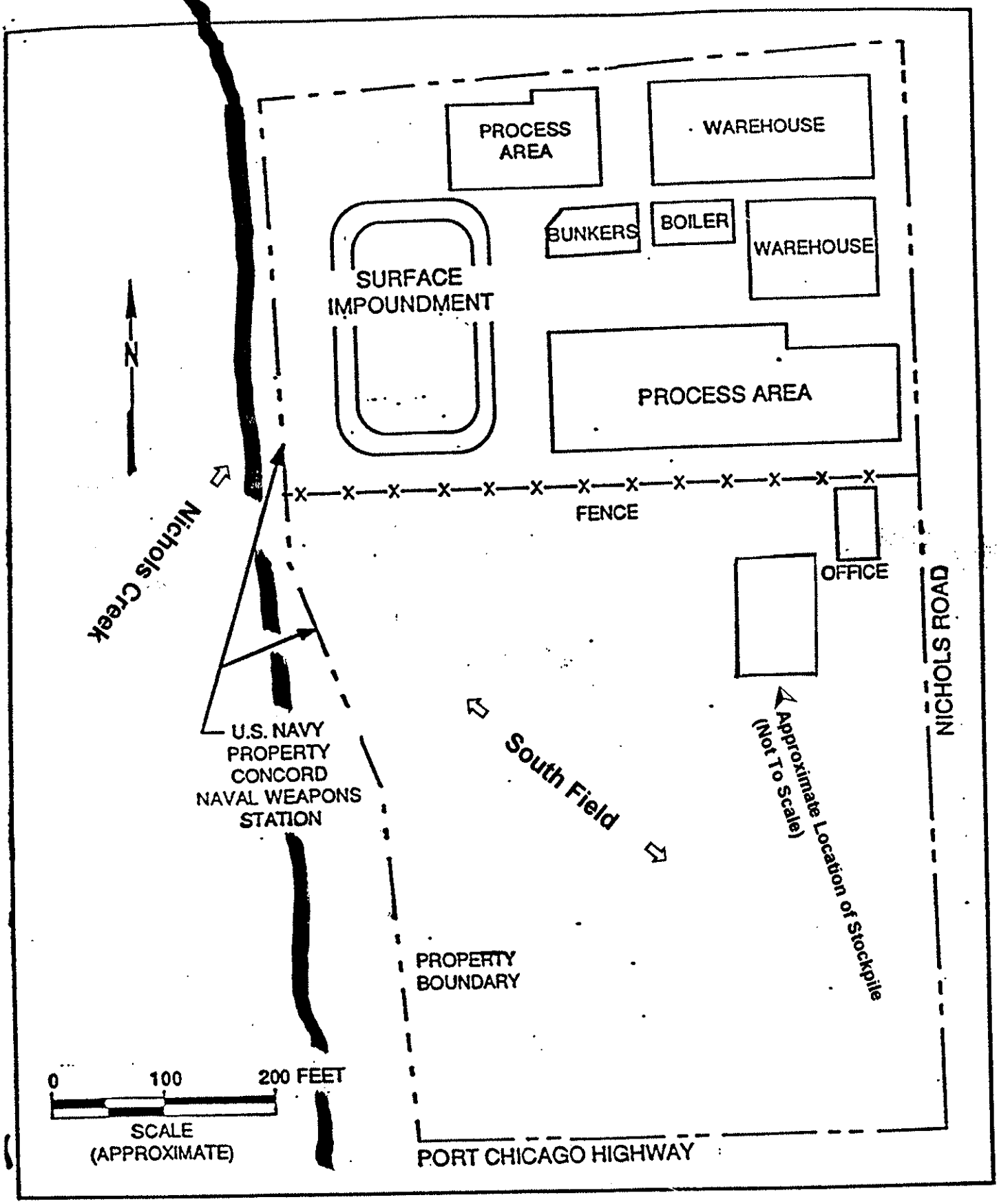
SITE LOCATION MAP

CLIENT: CHEMICAL & PIGMENT CO.

DATE: 5/8/92

LOCATION: 600 Nichols Road
Bay Point, California

FIGURE: 1

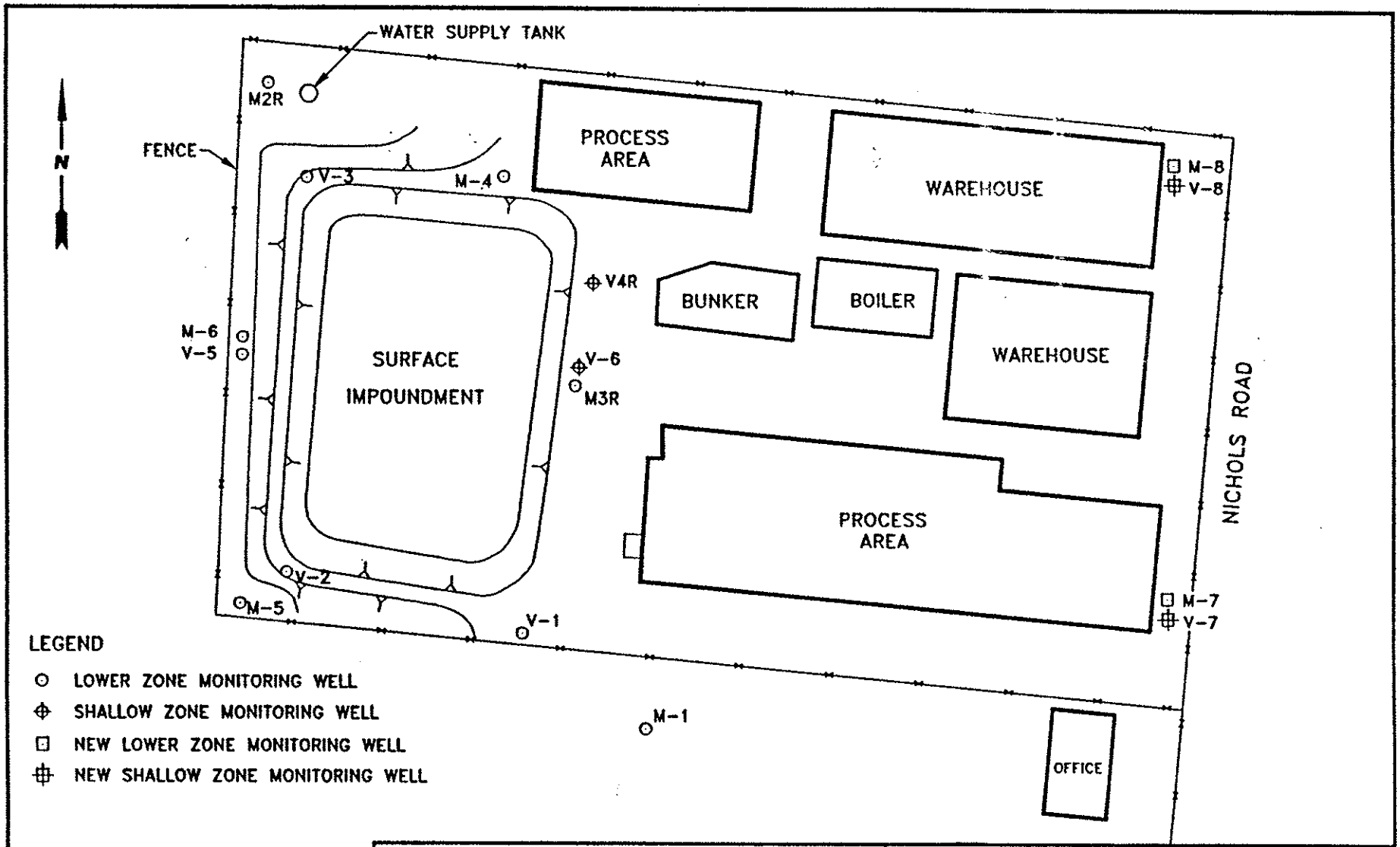


Site Plan

San Francisco Bay RWQCB
2101 Webster st. Suite 500
Oakland Ca 94612

Chemical & Pigment Company
600 Nichols Road
Bay Point, California

Figure: 2



Cal/EPA
RWQCB, San Francicsco Bay
2101 Webster St. Suite 500, Oakland Ca. 94612

MONITORING WELL LOCATIONS

CLIENT:	LOCATION:	REV. NO.:	DATE:
CHEMICAL & PIGMENT CO.	600 Nichols Road Bay Point, California	0	5/29/98

PM	PE/RG	DESIGNED	DETAILED			FIGURE:
						3

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM

FOR

CHEMICAL & PIGMENT CO.

600 NICHOLS ROAD, BAY POINT, CALIFORNIA, 94565

CONTRA COSTA COUNTY

CLOSED CLASS I SURFACE IMPOUNDMENT.

WASTE DISCHARGE REQUIREMENTS ORDER No. 98 – 065

CONSISTS OF

PART A

AND

PART B

PART A

A. General

1. The discharger shall conduct a self monitoring program of groundwater aquifer and stormawter at the vicinity of site.

2. Reporting responsibilities of waste dischargers are specified in Sections 13225 (a), 13267 (b), 13383, and 13387 (b) of the California Water Code and this Regional Board's Resolution No. 73-16.

3. The principal purposes of a self-monitoring program by a waste discharger are the following:

   a. To document compliance with waste discharge requirements and provision established by the Board and;

   b. To facilitate self-policing by the waste discharger in the prevention and abatement of pollution arising from waste discharge.

4. All monitoring instruments and equipment shall be properly calibrated and maintained to ensure accuracy of measurements.

B. Schedule of Sampling, Analysis, and Observations:

1. The discharger is required to perform sampling, analysis, and observations according to the schedule specified in Part B, and the requirements in Title 27 of the California Code of Regulation.

2. A statistical analysis shall be performed and reported annually as described in Subchapter 3, Title 27 of the California Code of Regulation.

C. Records to be Maintained by the Discharger

Written reports shall be maintained by the discharger for ground water monitoring, and shall be retained for a minimum of three years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge or when requested by the Board.

D. Reports to be Filed with the Board

The report period shall be done on a calendar semi annual basis. For the groundwater monitoring reports, written reports shall be filed regularly on semi annual basis within forty-five days from the end of the semi annual period monitored. On a semi-annual basis, a map or aerial photograph showing observation and monitoring station locations and plume contours (if any) for each chemical in each aquifer shall be included as part of the semi-annual Report. The reports shall include the following:

1. Letter of Transmittal - A letter transmitting the essential points in each self-monitoring report should accompany each report.

2. A summary sheet including the method and time of water level measurement; the type of pump used for purging, pump placement in the well, method of purging, pumping rate; equipment and methods used to monitor field pH, temperature, turbidity, and conductivity during purging; calibration of the field equipment, results of the pH, temperature, turbidity, and conductivity testing; well recovery time, and method of disposing of the purge water; and,

3. A summary of the status of any remedial work performed during that period. This shall be a brief and concise summary of the work initiated and completed.

4. The discharger shall describe, in the semi annual report, the reasons for significant changes in a pollutant concentration at a ground water monitoring well.

5. Laboratory statements of results of analyses specified in Part B must be included in each report. The director of the laboratory whose name appears on the laboratory certification shall supervise all analytical work in his/her laboratory and shall sign all reports of such work submitted to the Board.

6. By January 31 of each year the discharger shall submit an annual report to the Board covering the previous calendar year. These shall include tabular and graphical summaries of the monitoring data obtained during the previous year, a comprehensive discussion of the compliance record, and the corrective actions taken or planned which may be needed to bring the discharger into full compliance with the waste discharge requirements. I addition, a written summary of the ground water analyses indicating any change in the quality of the ground water.

Part B

A. Description of Observation Stations and Schedule of Observations

1. The observation stations shall consist of the existing ground water monitoring wells as documented in the attached table 1

2. The schedule of observations and grab sampling for the groundwater monitoring wells shall be semi annual as documented in table 1 and shall be conducted on alternate years within the months of January / July and then April / October. Report due are as follows:

January Sampling Due	March 1;
July Sampling Due	September 1;
April Sampling Due	June 1 and;
October Sampling Due	December 1.

B. Observations and Test Procedures

All test procedures and methods prescribed below may be changed upon request and approval of the Executive Officer.

1. The observations shall consist of the following:

   a. Water elevation reported to the nearest 0.1 inch for both depth to water from the ground surface and the elevation of the ground water level;

   b. Ground water temperature measured at the time of sampling and reported in degrees Fahrenheit;

   c. Ground water conductivity measured at the time of sampling as per Standard Methods 205 using potentiometric methodology;

   d. Ground water pH measured at the time of sampling as per Standard Methods 423 using potentiometric methodology; and

   e. Ground water turbidity measured at the time of sampling.

2. The test procedures for the ground water samples shall consist of the following:

   a. Groundwater analysis for zinc, copper and lead shall be performed using EPA methods numbers 7950, 7210 and 7421 respectively and / or the most current revised methods approved by EPA.

   b. In the event of increased pollutant concentration in the ground water samples, a revised monitoring program proposal to assure adequate definition of the extent

I, Loretta K. Barsamian, Executive Officer, hereby certify that the foregoing Self-Monitoring Program is as follows:

1. Has been developed in accordance with the procedures set forth in this Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in this Board's Order No. 98 - 065;

2. Effective on the date shown below; and,

3. May be reviewed or modified at any time subsequent to the effective date, upon written notice from the Executive Officer, or request from the discharger, and revisions will be ordered by the Executive officer or the Board.

Loretta K. Barsamian
Executive Officer

July 15, 1998
Date Ordered

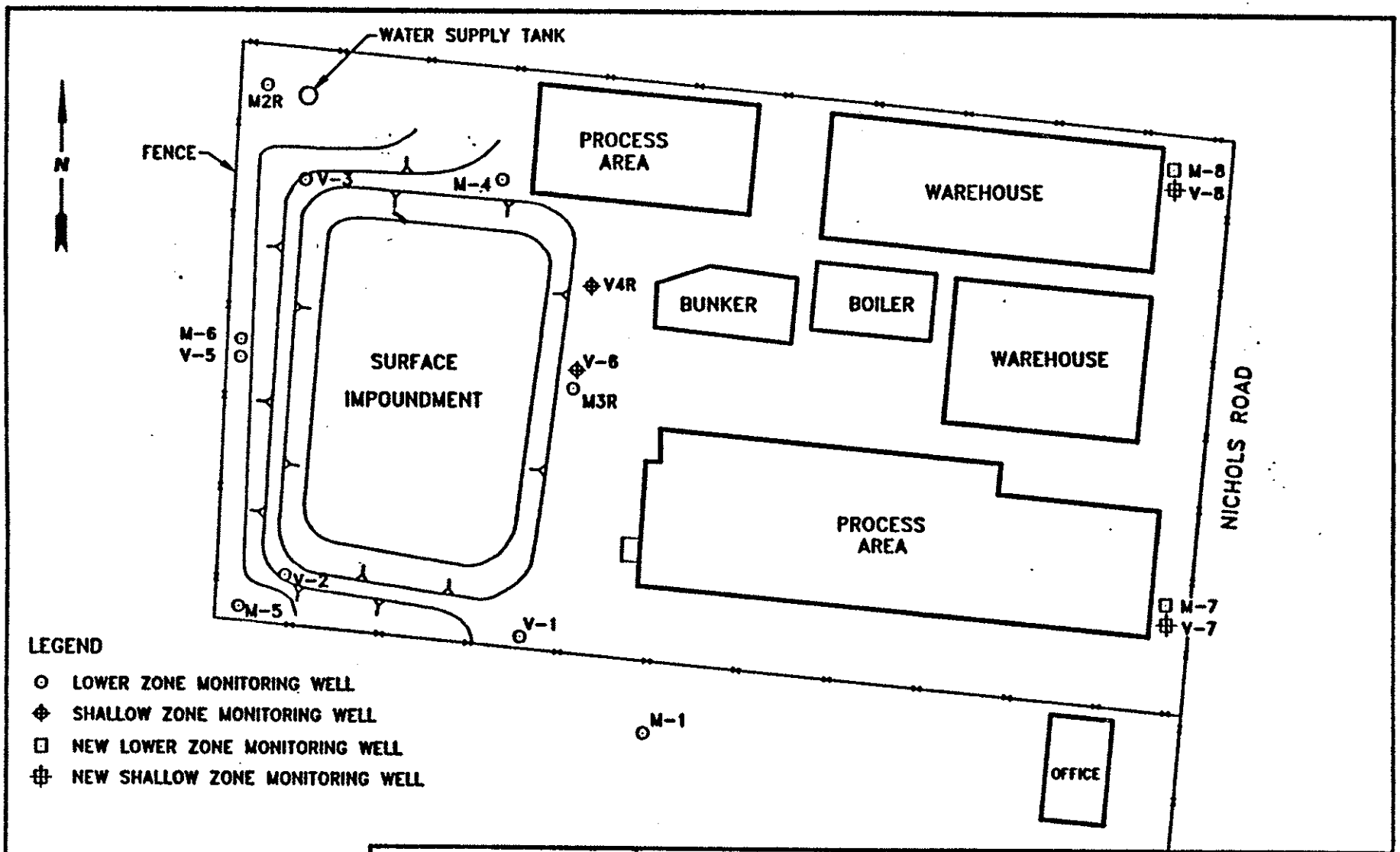
Attachment:

Table 1: Groundwater Monitoring Program for CPC Wells.
Figure 1b: Groundwater Monitoring Well Locations.
DTSC June 23, 1998 letter in Support of Stockpile Closure.

Table 1 Groundwater Monitoring Program For CPC Site Wells 6/30/98

				Analytic Parameters							
Well	Zone	Location	Sampling Frequency	Elevation to msl	Depth to GW from TOC	Water Temp	Water pH	Conductivity	Zinc	Copper	Lead
V1	shallow	upgradient	semi annual	X	X	X	X	X	X	X	X
V2	shallow		semi annual	X	X	X	X	X	X	X	X
V3	shallow		semi annual	X	X	X	X	X	X	X	X
V4R **	shallow	cogradient	semi annual	X	X	X	X	X	X	X	X
V5	shallow	cogradient	semi annual	X	X	X	X	X	X	X	X
V6	shallow	cogradient	semi annual	X	X	X	X	X	X	X	X
V7	shallow	upgradient	semi annual	X	X	X	X	X	X	X	X
V8	shallow	upgradient	semi annual	X	X	X	X	X	X	X	X
M1	lower	upgradient	semi annual	X	X	X	X	X	X	X	X
M2R	lower	downgrad	semi annual	X	X	X	X	X	X	X	X
M3R **	lower	cogradient	semi annual	X	X	X	X	X	X	X	X
M4 **	lower	downgrad	semi annual	X	X	X	X	X	X	X	X
M5	lower	upgradient	semi annual	X	X	X	X	X	X	X	X
M6 **	lower	cogradient	semi annual	X	X	X	X	X	X	X	X
M7	lower	upgradient	semi annual	X	X	X	X	X	X	X	X
M8	lower	upgradient	semi annual	X	X	X	X	X	X	X	X

Notes:
X in the cells indicate that paramenter will be analyzed
** in the cells indicate current groundwater extraction wells
Temp indicates temperature
TOC indicates top of casing
msl indicates mean sea level



Cal/EPA
RWQCB, San Francicsco Bay
2101 Webster St. Suite 500, Oakland Ca. 94612

MONITORING WELL LOCATIONS

CLIENT:	LOCATION:	REV. NO.:	DATE:
CHEMICAL & PIGMENT CO.	600 Nichols Road Bay Point, California	0	5/29/98

PM	PE/RG	DESIGNED	DETAILED			FIGURE:
						1B